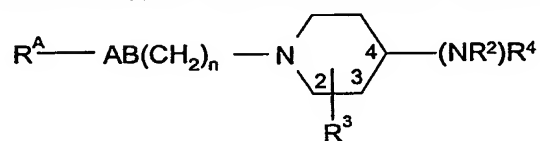


Claims

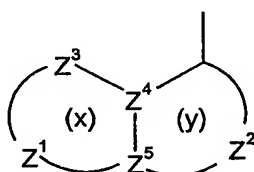
1. A compound of formula (I) or a pharmaceutically acceptable derivative thereof:



(I)

- 5 wherein:

R^A is an optionally substituted bicyclic carbocyclic or heterocyclic ring system of structure:



- 10 containing 0-3 heteroatoms in each ring in which:

at least one of rings (x) and (y) is aromatic;

one of Z^4 and Z^5 is C or N and the other is C;

Z^3 is N, NR^{13} , O, $S(O)_x$, CO, CR^1 or CR^1R^{1a} ;

Z^1 and Z^2 are independantly a 2 or 3 atom linker group each atom of which is

- 15 independently selected from N, NR^{13} , O, $S(O)_x$, CO, CR^1 and CR^1R^{1a} ;

such that each ring is independently substituted with 0-3 groups R^1 and/or R^{1a} ;

one of Z^1 , Z^2 , Z^3 , Z^4 and Z^5 is N, one is CR^{1a} and the remainder are CH, or one of Z^1 , Z^2 , Z^3 , Z^4 and Z^5 is CR^{1a} and the remainder are CH;

20

R^1 and R^{1a} are independently hydrogen; hydroxy; (C_{1-6}) alkoxy optionally substituted by (C_{1-6}) alkoxy, amino, piperidyl, guanidino or amidino any of which is optionally N-substituted by one or two (C_{1-6}) alkyl, acyl or (C_{1-6}) alkylsulphonyl groups, $CONH_2$, hydroxy, (C_{1-6}) alkylthio, heterocyclylthio, heterocycloxy, arylthio, aryloxy, acylthio, acyloxy or (C_{1-6}) alkylsulphonyloxy; (C_{1-6}) alkoxy-substituted (C_{1-6}) alkyl; hydroxy (C_{1-6}) alkyl; halogen; (C_{1-6}) alkyl; (C_{1-6}) alkylthio; trifluoromethyl; trifluoromethoxy; cyano; carboxy; nitro; azido; acyl; acyloxy; acylthio; (C_{1-6}) alkylsulphonyl; (C_{1-6}) alkylsulphoxide; arylsulphonyl; arylsulphoxide or an amino, piperidyl, guanidino or amidino group optionally N-substituted by one or two (C_{1-6}) alkyl, acyl or (C_{1-6}) alkylsulphonyl groups, or when Z^3 and the adjacent atom are CR^1 and CR^{1a} , R^1 and R^{1a} may together represent (C_{1-2}) alkylenedioxy;

30

provided that R¹ and R^{1a}, on the same carbon atom are not both optionally substituted hydroxy or amino;

provided that

- 5 (i) when R^A is optionally substituted quinolin-4-yl:
 it is unsubstituted in the 6-position; or
 it is substituted by at least one hydroxy (C₁₋₆)alkyl, cyano or carboxy group at the
 2-, 5-, 6-, 7- or 8-position; or
 it is substituted by at least one trifluoromethoxy group; or
 10 R¹ and R^{1a} together represent (C₁₋₂)alkylenedioxy;
 (ii) when R^A is optionally substituted quinazolin-4-yl, cinnolin-4-yl, 1,5-naphthyridin-4-yl,
 1,7-naphthyridin-4-yl or 1,8-naphthyridin-4-yl:
 it is substituted by at least one hydroxy (C₁₋₆)alkyl, cyano or carboxy group at the
 2-, 5-, 6-, 7- or 8-position as available; or
 15 it is substituted by at least one trifluoromethoxy group; or
 R¹ and R^{1a} together represent (C₁₋₂)alkylenedioxy;

R² is hydrogen, or (C₁₋₄)alkyl or (C₂₋₄)alkenyl optionally substituted with 1 to 3 groups selected from:

- 20 amino optionally substituted by one or two (C₁₋₄)alkyl groups; carboxy; (C₁₋₄)alkoxycarbonyl; (C₁₋₄)alkylcarbonyl; (C₂₋₄)alkenyloxycarbonyl; (C₂₋₄)alkenylcarbonyl; aminocarbonyl wherein the amino group is optionally substituted by hydroxy, (C₁₋₄)alkyl, hydroxy(C₁₋₄)alkyl, aminocarbonyl(C₁₋₄)alkyl, (C₂₋₄)alkenyl, (C₁₋₄)alkylsulphonyl, trifluoromethylsulphonyl, (C₂₋₄)alkenylsulphonyl, (C₁₋₄)alkoxycarbonyl, (C₁₋₄)alkylcarbonyl, (C₂₋₄)alkenyloxycarbonyl or (C₂₋₄)alkenylcarbonyl; cyano; tetrazolyl; 2-oxo-oxazolidinyl optionally substituted by R¹⁰; 3-hydroxy-3-cyclobutene-1,2-dione-4-yl; 2,4-thiazolidinedione-5-yl; tetrazol-5-ylaminocarbonyl; 1,2,4-triazol-5-yl optionally substituted by R¹⁰; 5-oxo-1,2,4-oxadiazol-3-yl; halogen; (C₁₋₄)alkylthio; trifluoromethyl; hydroxy optionally substituted by (C₁₋₄)alkyl, (C₂₋₄)alkenyl, (C₁₋₄)alkoxycarbonyl, (C₁₋₄)alkylcarbonyl, (C₂₋₄)alkenyloxycarbonyl, (C₂₋₄)alkenylcarbonyl; oxo; (C₁₋₄)alkylsulphonyl; (C₂₋₄)alkenylsulphonyl; or (C₁₋₄)aminosulphonyl wherein the amino group is optionally substituted by (C₁₋₄)alkyl or (C₂₋₄)alkenyl;

- 35 R³ is hydrogen; or
 R³ is in the 2-, 3- or 4-position and is:

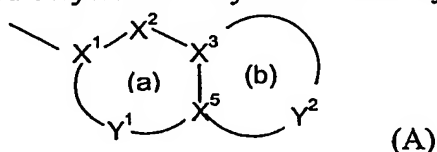
- trifluoromethyl; carboxy; (C₁₋₆)alkoxycarbonyl; (C₂₋₆)alkenyloxycarbonyl; aminocarbonyl wherein the amino group is optionally substituted by hydroxy, (C₁₋₆)alkyl, hydroxy(C₁₋₆)alkyl, aminocarbonyl(C₁₋₆)alkyl, (C₂₋₆)alkenyl, (C₁₋₆)alkylsulphonyl, trifluoromethylsulphonyl, (C₂₋₆)alkenylsulphonyl, (C₁₋₆)alkoxycarbonyl, (C₁₋₆)alkylcarbonyl, (C₂₋₆)alkenyloxycarbonyl or (C₂₋₆)alkenylcarbonyl and optionally further substituted by (C₁₋₆)alkyl, hydroxy(C₁₋₆)alkyl, aminocarbonyl(C₁₋₆)alkyl or (C₂₋₆)alkenyl; cyano; tetrazolyl; 2-oxo-oxazolidinyl optionally substituted by R¹⁰; 3-hydroxy-3-cyclobutene-1,2-dione-4-yl; 2,4-thiazolidinedione-5-yl; tetrazol-5-ylaminocarbonyl; 1,2,4-triazol-5-yl optionally substituted by R¹⁰; or 5-oxo-1,2,4-oxadiazol-3-yl; or (C₁₋₄)alkyl or ethenyl optionally substituted with any of the substituents listed above for R³ and/or 0 to 2 groups R¹² independently selected from:
- halogen; (C₁₋₆)alkylthio; trifluoromethyl; (C₁₋₆)alkoxycarbonyl; (C₁₋₆)alkylcarbonyl; (C₂₋₆)alkenyloxycarbonyl; (C₂₋₆)alkenylcarbonyl; hydroxy optionally substituted by (C₁₋₆)alkyl, (C₂₋₆)alkenyl, (C₁₋₆)alkoxycarbonyl, (C₁₋₆)alkylcarbonyl, (C₂₋₆)alkenyloxycarbonyl, (C₂₋₆)alkenylcarbonyl or aminocarbonyl wherein the amino group is optionally substituted by (C₁₋₆)alkyl, (C₂₋₆)alkenyl, (C₁₋₆)alkylcarbonyl or (C₂₋₆)alkenylcarbonyl; amino optionally mono- or disubstituted by (C₁₋₆)alkoxycarbonyl, (C₁₋₆)alkylcarbonyl, (C₂₋₆)alkenyloxycarbonyl, (C₂₋₆)alkenylcarbonyl, (C₁₋₆)alkyl, (C₂₋₆)alkenyl, (C₁₋₆)alkylsulphonyl, (C₂₋₆)alkenylsulphonyl or aminocarbonyl wherein the amino group is optionally substituted by (C₁₋₆)alkyl, hydroxy(C₁₋₆)alkyl, aminocarbonyl(C₁₋₆)alkyl, (C₂₋₆)alkenyl, (C₁₋₆)alkoxycarbonyl, (C₁₋₆)alkylcarbonyl, (C₂₋₆)alkenyloxycarbonyl or (C₂₋₆)alkenylcarbonyl and optionally further substituted by (C₁₋₆)alkyl, hydroxy(C₁₋₆)alkyl, aminocarbonyl(C₁₋₆)alkyl or (C₂₋₆)alkenyl; oxo; (C₁₋₆)alkylsulphonyl; (C₂₋₆)alkenylsulphonyl; or (C₁₋₆)aminosulphonyl wherein the amino group is optionally substituted by (C₁₋₆)alkyl or (C₂₋₆)alkenyl; or
- R³ is in the 2-position and is oxo; or
- R³ is in the 3-position and is fluorine, amino optionally substituted by a group selected from hydroxy, (C₁₋₆)alkylsulphonyl, trifluoromethylsulphonyl, (C₂₋₆)alkenylsulphonyl, (C₁₋₆)alkylcarbonyl, (C₂₋₆)alkenylcarbonyl, (C₁₋₆)alkoxycarbonyl, (C₂₋₆)alkenyloxycarbonyl, (C₁₋₆)alkyl and (C₂₋₆)alkenyl, wherein a (C₁₋₆)alkyl or (C₂₋₆)alkenyl moiety may be optionally substituted with up to 2 groups R¹², or hydroxy optionally substituted as described above for R¹² hydroxy;

in addition when R^3 is disubstituted with a hydroxy or amino containing substituent and carboxy containing substituent these may together form a cyclic ester or amide linkage, respectively;

R^4 is a group $-U-R^5$ where

5 U is selected from CO, SO₂ and CH₂ and

R^5 is an optionally substituted bicyclic carbocyclic or heterocyclic ring system (A):



containing up to four heteroatoms in each ring in which

at least one of rings (a) and (b) is aromatic;

10 X^1 is C or N when part of an aromatic ring, or CR¹⁴ when part of a non-aromatic ring;

X^2 is N, NR¹³, O, S(O)_x, CO or CR¹⁴ when part of an aromatic or non-aromatic ring or may in addition be CR¹⁴R¹⁵ when part of a non aromatic ring;

X^3 and X^5 are independently N or C;

15 Y^1 is a 0 to 4 atom linker group each atom of which is independently selected from N, NR¹³, O, S(O)_x, CO and CR¹⁴ when part of an aromatic or non-aromatic ring or may additionally be CR¹⁴R¹⁵ when part of a non aromatic ring;

Y^2 is a 2 to 6 atom linker group, each atom of Y^2 being independently selected from N, NR¹³, O, S(O)_x, CO, CR¹⁴ when part of an aromatic or non-aromatic ring or may additionally be CR¹⁴R¹⁵ when part of a non aromatic ring;

20 each of R¹⁴ and R¹⁵ is independently selected from: H; (C₁₋₄)alkylthio; halo; carboxy(C₁₋₄)alkyl; halo(C₁₋₄)alkoxy; halo(C₁₋₄)alkyl; (C₁₋₄)alkyl; (C₂₋₄)alkenyl; (C₁₋₄)alkoxycarbonyl; formyl; (C₁₋₄)alkylcarbonyl; (C₂₋₄)alkenyloxycarbonyl; (C₂₋₄)alkenylcarbonyl; (C₁₋₄)alkylcarbonyloxy; (C₁₋₄)alkoxycarbonyl(C₁₋₄)alkyl; hydroxy; hydroxy(C₁₋₄)alkyl; mercapto(C₁₋₄)alkyl; (C₁₋₄)alkoxy; nitro; cyano; carboxy; amino or aminocarbonyl optionally substituted as for corresponding substituents in R³; (C₁₋₄)alkylsulphonyl; (C₂₋₄)alkenylsulphonyl; or aminosulphonyl wherein the amino group is optionally mono- or di-substituted by (C₁₋₄)alkyl or (C₂₋₄)alkenyl; aryl; aryl(C₁₋₄)alkyl; aryl(C₁₋₄)alkoxy or

30 R¹⁴ and R¹⁵ may together represent oxo;

each R¹³ is independently H; trifluoromethyl; (C₁₋₄)alkyl optionally substituted by hydroxy, (C₁₋₆)alkoxy, (C₁₋₆)alkylthio, halo or trifluoromethyl; (C₂₋₄)alkenyl; aryl; aryl (C₁₋₄)alkyl; arylcarbonyl; heteroarylcarbonyl; (C₁₋₄)alkoxycarbonyl; (C₁₋₄)alkylcarbonyl; formyl; (C₁₋₆)alkylsulphonyl; or aminocarbonyl wherein the amino group is optionally substituted by (C₁₋₄)alkoxycarbonyl, (C₁₋₄)alkylcarbonyl, (C₂₋

4)alkenyloxycarbonyl, (C₂₋₄)alkenylcarbonyl, (C₁₋₄)alkyl or (C₂₋₄)alkenyl and optionally further substituted by (C₁₋₄)alkyl or (C₂₋₄)alkenyl;

each x is independently 0, 1 or 2

5

n is 0 and AB is NR¹¹CO, CO-CR⁸R⁹, CR⁶R⁷-CO, NHR¹¹SO₂, CR⁶R⁷-SO₂ or CR⁶R⁷-CR⁸R⁹, provided that R⁸ and R⁹ are not optionally substituted hydroxy or amino and R⁶ and R⁸ do not represent a bond:

10 or n is 1 and AB is NR¹¹CO, CO-CR⁸R⁹, CR⁶R⁷-CO, NR¹¹SO₂, CONR¹¹, CR⁶R⁷-CR⁸R⁹, O-CR⁸R⁹ or NR¹¹-CR⁸R⁹;

provided that R⁶ and R⁷, and R⁸ and R⁹ are not both optionally substituted hydroxy or amino;

and wherein:

15 each of R⁶, R⁷, R⁸ and R⁹ is independently selected from: H; (C₁₋₆)alkoxy; (C₁₋₆)alkylthio; halo; trifluoromethyl; azido; (C₁₋₆)alkyl; (C₂₋₆)alkenyl; (C₁₋₆)alkoxycarbonyl; (C₁₋₆)alkylcarbonyl; (C₂₋₆)alkenyloxycarbonyl; (C₂₋₆)alkenylcarbonyl; hydroxy, amino or aminocarbonyl optionally substituted as for corresponding substituents in R³; (C₁₋₆)alkylsulphonyl; (C₂₋₆)alkenylsulphonyl; or (C₁₋₆)aminosulphonyl wherein the amino group is optionally substituted by (C₁₋₆)alkyl or (C₂₋₆)alkenyl;

20 or R⁶ and R⁸ together represent a bond and R⁷ and R⁹ are as above defined;

R¹⁰ is selected from (C₁₋₄)alkyl; (C₂₋₄)alkenyl and aryl any of which may be optionally substituted by a group R¹² as defined above; carboxy; aminocarbonyl wherein the amino group is optionally substituted by hydroxy, (C₁₋₆)alkyl, (C₂₋₆)alkenyl, (C₁₋₆)alkylsulphonyl, trifluoromethylsulphonyl, (C₂₋₆)alkenylsulphonyl, (C₁₋₆)alkoxycarbonyl, (C₁₋₆)alkylcarbonyl, (C₂₋₆)alkenyloxycarbonyl or (C₂₋₆)alkenylcarbonyl and optionally further substituted by (C₁₋₆)alkyl or (C₂₋₆)alkenyl; and

30

R¹¹ is hydrogen; trifluoromethyl, (C₁₋₆)alkyl; (C₂₋₆)alkenyl; (C₁₋₆)alkoxycarbonyl; (C₁₋₆)alkylcarbonyl; or aminocarbonyl wherein the amino group is optionally substituted by (C₁₋₆)alkoxycarbonyl, (C₁₋₆)alkylcarbonyl, (C₂₋₆)alkenyloxycarbonyl, (C₂₋₆)alkenylcarbonyl, (C₁₋₆)alkyl or (C₂₋₆)alkenyl and optionally further substituted by (C₁₋₆)alkyl or (C₂₋₆)alkenyl;

35

or where one of R³ and R⁶, R⁷, R⁸ or R⁹ contains a carboxy group and the other contains a hydroxy or amino group they may together form a cyclic ester or amide linkage.

2. A compound according to claim 1 wherein R^A is optionally substituted
 5 isoquinolin-5-yl, quinolin-8-yl, thieno[3,2-b]pyridin-7-yl, 2,3-dihydro-[1,4]dioxino[2,3-b]pyridin-8-yl, quinoxalin-5-yl, isoquinolin-8-yl, [1,6]-naphthyridin-4-yl, 1,2,3,4-tetrahydroquinoxalin-5-yl or 1,2-dihydroisoquinoline-8-yl..
3. A compound according to any preceding claim wherein R¹ is H, methoxy, methyl,
 10 cyano or halogen and R^{1a} is H.
4. A compound according to any preceding claim wherein R³ is hydrogen; optionally substituted hydroxy; optionally substituted amino; halogen; (C₁₋₄)alkoxycarbonyl; CONH₂; 1-hydroxyalkyl; CH₂CO₂H; CH₂CONH₂; -CONHCH₂CONH₂; 1,2-
 15 dihydroxyalkyl; CH₂CN; 2-oxo-oxazolidin-5-yl; or 2-oxo-oxazolidin-5-yl(C₁₋₄alkyl).
5. A compound according to any preceding claim wherein n is 0 and A and B are both CH₂, A is CHOH and B is CH₂ or A is NH and B is CO.
6. A compound according to any preceding claim wherein -U- is -CH₂-.
7. A compound according to any preceding claim wherein the heterocyclic ring (A) having 8-11 ring atoms including 2-4 heteroatoms of which at least one is N or NR¹³ in which Y² contains 2-3 heteroatoms, one of which is S and 1-2 are N, with one N bonded
 25 to X³ or the heterocyclic ring (A) has ring (a) aromatic selected from optionally substituted benzo and pyrido and ring (b) non aromatic and Y² has 3-5 atoms, including a heteroatom bonded to X⁵ selected from O, S or NR¹³, where R¹³ is other than hydrogen, and NHCO bonded via N to X³, or O bonded to X³.
8. A compound according to any one of claims 1 to 6 wherein R⁵ is selected from:
 30 3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-6-yl
 3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-yl
 7-chloro-3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-yl
 7-fluoro-3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-yl
 35 2,3-dihydro-[1,4]dioxino[2,3-c]pyridin-7-yl.
9. A compound according to claim 1 selected from:

- 4-(2-{4-[(3-Oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-6-ylmethyl)-amino]-piperidin-1-yl}-ethyl)-quinoline-6-carbonitrile 6-({(3R,4S)-3-Fluoro-1-[(R)-2-hydroxy-2-(2-methoxy-quinolin-8-yl)-ethyl]-piperidin-4-ylamino}-methyl)-4H-pyrido[3,2-b][1,4]thiazin-3-one
- 5 6-({(3S,4R)-3-Fluoro-1-[(R)-2-hydroxy-2-(2-methoxy-quinolin-8-yl)-ethyl]-piperidin-4-ylamino}-methyl)-4H-pyrido[3,2-b][1,4]thiazin-3-one
- 6-({(3R,4R)-3-Hydroxy-1-[(R)-2-hydroxy-2-(2-methoxy-quinolin-8-yl)-ethyl]-piperidin-4-ylamino}-methyl)-4H-pyrido[3,2-b][1,4]thiazin-3-one
- 6-({(3S,4S)-3-Hydroxy-1-[(R)-2-hydroxy-2-(2-methoxy-quinolin-8-yl)-ethyl]-piperidin-4-ylamino}-methyl)-4H-pyrido[3,2-b][1,4]thiazin-3-one
- 10 6-({(3R,4S)-1-[2-(2,3-Dihydro-[1,4]dioxino[2,3-f]quinolin-10-yl)-ethyl]-3-fluoro-piperidin-4-ylamino}-methyl)-4H-pyrido[3,2-b][1,4]thiazin-3-one
- 6-{{(1-{(2R/S)-2-hydroxy-2-[3-(methyloxy)-5-quinoxaliny]ethyl}-4-piperidinyl)amino)methyl}-2H-pyrido[3,2-b][1,4]thiazin-3(4H)-one
- 15 (1R/S)-2-{4-[(2,3-dihydro[1,4]dioxino[2,3-c]pyridin-7-ylmethyl)amino]-1-piperidinyl}-1-[3-(methyloxy)-5-quinoxaliny]ethanol
- {1-[2-(9-Chloro-2,3-dihydro-[1,4]dioxino[2,3-f]quinolin-10-yl)-ethyl]-piperidin-4-yl}-(2,3-dihydro-[1,4]dioxino[2,3-c]pyridin-7-ylmethyl)-amine 6-{{(1-{2-hydroxy-2-[2-(methyloxy)-8-quinoliny]ethyl}-4-piperidinyl)amino)methyl}-2H-pyrido[3,2-b][1,4]oxazin-3(4H)-one
- 20 6-{{(1-[2-(4-quinoliny]ethyl)-4-piperidinyl)amino)methyl}-2H-pyrido[3,2-b][1,4]thiazin-3(4H)-one
- 4-[2-(3-hydroxy-4-{{(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-6-yl)methyl}amino)-1-piperidinyl)ethyl]-6-quinolinecarbonitrile (isomer E2)
- 25 4-[2-(3-hydroxy-4-{{(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-yl)methyl}amino)-1-piperidinyl)ethyl]-6-quinolinecarbonitrile (isomer E2)
- 4-[2-(3-hydroxy-4-{{(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-6-yl)methyl}amino)-1-piperidinyl)ethyl]-6-quinolinecarbonitrile(E1 isomer)
- 4-[2-(3-hydroxy-4-{{(3-oxo-3,4-dihydro-2H-pyrido[3,2-b][1,4]thiazin-6-yl)methyl}amino)-1-piperidinyl)ethyl]-6-quinolinecarbonitrile(E1 isomer)
- 30 or a pharmaceutically acceptable derivative thereof.

10. A method of treatment of bacterial infections in mammals, particularly in man, which method comprises the administration to a mammal in need of such treatment an effective amount of a compound according to claim 1.
- 35

11. The use of a compound according to claim 1, in the manufacture of a medicament for use in the treatment of bacterial infections in mammals.

12. A pharmaceutical composition comprising a compound according to claim 1 and a pharmaceutically acceptable carrier for use in the treatment of bacterial infections in mammals.

13. A pharmaceutical composition comprising a compound according to claim 1, and a pharmaceutically acceptable carrier.

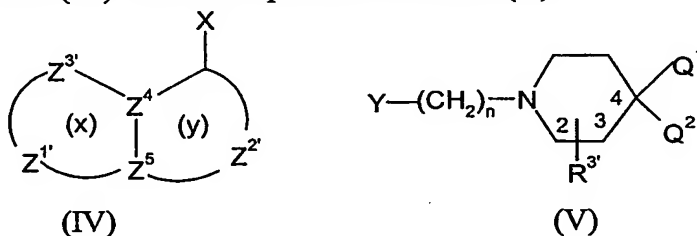
10

14. A compound according to claim 1 for use as a medicament.

15. A compound according to claim 1 for use in the treatment of bacterial infections in mammals.

15

16. A process for preparing a compound of formula (I) according to claim 1, or a pharmaceutically acceptable derivative thereof, which process comprises reacting a compound of formula (IV) with a compound of formula (V):



20

wherein n is as defined in formula (I); Z^{1'}, Z^{2'}, Z^{3'}, R^{1'}, and R^{3'} are Z¹, Z², Z³, R¹, and R³ as defined in formula (I) or groups convertible thereto; Z⁴ and Z⁵ are as defined in formula (I);

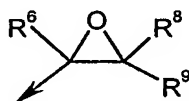
Q¹ is NR^{2'}R^{4'} or a group convertible thereto wherein R^{2'} and R^{4'} are R² and R⁴ as defined in formula (I) or groups convertible thereto and Q² is H or R^{3'} or Q¹ and Q² together form an optionally protected oxo group;

- 25
- (i) X is A'-COW, Y is H and n is 0;
 - (ii) X is CR⁶=CR⁸R⁹, Y is H and n is 0;
 - (iii) X is oxirane, Y is H and n is 0;
 - 30 (iv) X is N=C=O and Y is H and n is 0;
 - (v) one of X and Y is CO₂RY and the other is CH₂CO₂R^x;
 - (vi) X is CHR⁶R⁷ and Y is C(=O)R⁹;
 - (vii) X is CR⁷=PR^z₃ and Y is C(=O)R⁹ and n=1;
 - (viii) X is C(=O)R⁷ and Y is CR⁹=PR^z₃ and n=1;

- (ix) Y is COW and X is $\text{NHR}^{11'}$, NCO or $\text{NR}^{11'}\text{COW}$ and $n=0$ or 1 or when $n=1$ X is COW and Y is $\text{NHR}^{11'}$, NCO or $\text{NR}^{11'}\text{COW}$;
- (x) X is $\text{NHR}^{11'}$ and Y is $\text{C}(=\text{O})\text{R}^8$ and $n=1$;
- (xi) X is $\text{NHR}^{11'}$ and Y is $\text{CR}^8\text{R}^9\text{W}$ and $n=1$;
- 5 (xii) X is $\text{NR}^{11'}\text{COCH}_2\text{W}$ or $\text{NR}^{11'}\text{SO}_2\text{CH}_2\text{W}$ and Y is H and $n=0$;
- (xiii) X is $\text{CR}^6\text{R}^7\text{SO}_2\text{W}$ and Y is H and $n=0$;
- (xiv) X is W or OH and Y is CH_2OH and n is 1;
- (xv) X is $\text{NHR}^{11'}$ and Y is SO_2W or X is $\text{NR}^{11'}\text{SO}_2\text{W}$ and Y is H, and n is 0;
- (xvi) X is W and Y is $\text{CONHR}^{11'}$;
- 10 (xvii) X is $-\text{CH}=\text{CH}_2$ and Y is H and $n=0$;

in which W is a leaving group, e.g. halo, methanesulphonyloxy, trifluoromethanesulphonyloxy or imidazolyl; R^x and R^y are (C_{1-6}) alkyl; R^z is aryl or (C_{1-6}) alkyl; A' and $\text{NR}^{11'}$ are A and NR^{11} as defined in formula (I), or groups convertible thereto; and oxirane is:

15



wherein R^6 , R^8 and R^9 are as defined in formula (I);

- and thereafter optionally or as necessary converting Q^1 and Q^2 to $\text{NR}^{2'}\text{R}^{4'}$; converting A', $\text{Z}^{1'}$, $\text{Z}^{2'}$, $\text{Z}^{3'}$, $\text{R}^{1'}$, $\text{R}^{2'}$, $\text{R}^{3'}$, $\text{R}^{4'}$ and $\text{NR}^{11'}$ to A, Z^1 , Z^2 , Z^3 , R^1 , R^2 , R^3 , R^4 and NR^{11} ;
- 20 converting A-B to other A-B, interconverting R^1 , R^2 , R^3 and/or R^4 , and/or forming a pharmaceutically acceptable derivative thereof.